

Amendment to the Claims:

1. (Original) A nuclear camera system comprising:
a detector which acquires radionuclide event data;
an image processor which processes the event data to produce image data;
an image data storage medium which stores the image data; and
5 an image data processor which formats the image data for storage on the
storage medium in an extensible and open data format.
2. (Original) The nuclear camera system of Claim 1, wherein the image
data processor formats the image data in xml format.
3. (Original) The nuclear camera system of Claim 1 or 2, wherein the data
format is self-descriptive.
4. (Original) The nuclear camera system of Claim 3, wherein the data
format further comprises format definitions which are available with the image data.
5. (Original) The nuclear camera system of Claim 4, wherein a format
definition describes the relationship between two or more pieces of image data.
6. (Original) The nuclear camera system of Claim 5, wherein the image
data is stored in a data file; and wherein the image data file contains a pointer to a file
storing a definition of the image data format.
7. (Original) The nuclear camera system of Claim 6, wherein the pointer
is to an address of a file stored on the nuclear camera system.
8. (Original) The nuclear camera system of Claim 6, wherein the pointer
is to a URL address where the image data definition file may be found.

9. (Currently Amended) ~~[[The]]~~ A nuclear camera system of Claim 6,
~~wherein~~ including:

a detector which acquires radionuclide emission data;

an image processor which processes the emission data to produce image

5 data;

an image data storage medium which stores the image data;

an image data processor which is programmed to perform the steps of:

formatting the image data file is of the form in
<image.xml> data file format,

10 creating and wherein the an image data file format
definition file is of the form in <image.dtd> format which format
definition describes a relationship among pieces of the image
data,

storing the image data format definition in a format definition file,

15 storing the formatted image data in a data file which
includes a pointer to the image data format definition file, and

storing collimator data in a collimators.xml data file,
isotope data in a isotopes.xml data file, and energy window data
in a energywindowsets.xml data file which each points to one of

20 a corresponding control data format definition file
collimators.dtd, isotopes.dtd, and energywindowsets.dtd; and

an acquisition controller which controls the detector to acquire the
emission data and accesses control data including at least one of the collimator data,
the isotope data, and the energy window data in the respective collimators.xml,
25 isotopes.xml, and energywindowsets.xml data files.

10. (Original) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

- 5 an acquisition controller which acts to control the detector to acquire event data in accordance with a study protocol; and
- a control data storage medium, coupled to the acquisition controller, which stores control data in an extensible and open data format.

11. (Original) The nuclear camera system of Claim 10, wherein the control data is stored in xml format.

12. (Currently Amended) ~~[[The]]~~ A nuclear camera system of Claim 11,
~~wherein the~~ including:

- a detector which acquires radionuclide event data;
- an image processor which processes the event data to produce image data;
- 5 a control data storage medium which stores control data comprises
including at least one of protocol data, collimator data, isotope data, and energy window data; and
- an acquisition controller which is coupled to the control data storage medium to access the control data and control the detector to acquire the event data.

13. (Currently Amended) The nuclear camera system of Claim 12, wherein the control data is ~~[[of]]~~ stored at least in one of ~~the forms of protocols.xml, collimators.xml, isotopes.xml, and energywindowsets.xml~~ energywindowsets.xml form.

14. (Currently Amended) ~~The nuclear camera system of Claim 12,~~
~~wherein the~~ A radiation based diagnostic imaging system including:

- a detector which acquires radiation data;
- an image processor which processes the radiation data to produce image
- 5 data;
- a control data storage medium, coupled to the acquisition controller,
which stores the control data in an xml format; and
- an acquisition controller which executes a script utilizing an xml file to control the acquisition of the ~~[[event]]~~ radiation data.

15. (Currently Amended) The ~~nuclear-camera~~ system of Claim 14, wherein the xml file utilized by the script is a protocol file of the form <protocol.xml>.

16. (Currently Amended) The nuclear camera system of Claim 13, wherein ~~[[an]]~~ the at least one stored xml ~~[[files]]~~ file ~~[[point]]~~ points to a corresponding format definition file of one ~~at least one of the forms of~~ protocols.dtd, collimators.dtd, isotopes.dtd, and energywindowsets.dtd.

17. (Original) A nuclear camera system comprising:
a detector which acquires radionuclide event data;
an image processor which processes the event data to produce image data;
an acquisition controller which acts to control the detector to acquire
5 event data in accordance with a study protocol; and
a control data storage medium, coupled to the acquisition controller, which stores control data in xml format, the control data comprising xml files provided by the camera system manufacturer and xml files modified or created by a camera user.

18. (Original) The nuclear camera system of Claim 17, further comprising an image data storage medium, coupled to the image processor, which stores image data in xml format.

19. (Original) The nuclear camera system of Claim 18, further comprising a user interface and a server, responsive to the user interface and coupled to the control data storage medium and the image data storage medium, which accesses xml control data files or xml image data files in response to user commands.

20. (Original) ~~The nuclear camera~~ A diagnostic imaging system of Claim 19, wherein the including:

a detector which acquires diagnostic data;

an image processor which processes the diagnostic data to produce image
5 data;

an acquisition controller which controls the detector to acquire diagnostic
data;

a control data storage medium, coupled to the acquisition controller,
which stores control data in xml format;

10 an image data storage medium, coupled to the image processor, which
stores image data in xml format; and

a server coupled to the control data storage medium and the image data
storage medium, which server accesses at least one of xml control data files and xml
image data files and executes scripts which utilize xml control data files.

21. (Previously Presented) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

5 an acquisition controller which acts to control the detector to acquire
event data in accordance with a study protocol, wherein the acquisition controller
executes a script utilizing an xml file to control the acquisition of event data; and

a control data storage medium, coupled to the acquisition controller,
which stores control data in an extensible and open data format.

22. (Currently Amended) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

5 an acquisition controller which acts to control the detector to acquire event
data in accordance with a study protocol; [[and]]

a control data storage medium, coupled to the acquisition controller, which stores control data in xml format, the control data comprising xml files provided by the camera system manufacturer and xml files modified or created by a camera user[[]]; and

- 10 a user interface and a server, responsive to the user interface and coupled to the control data storage medium and the image data storage medium, which accesses xml control data files or xml image data files in response to user commands wherein the server executes scripts which utilize xml control data files.